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Group Art Unit: 3743

REMARKS

By the present amendment, paragraphs 52 and 68 of the specification have been amended. Further, claim 12 has been amended to correct a clerical error.

In the Office Action, the drawings were objected to as failing to comply with 37 C.F.R. 1.84(p)(4) for the use of reference characters to designate different parts. It is believed that this objection is in error because the numerals 134 and 418 are used only to show the same parts and are not used to show different parts.

The Examiner appears to be objecting to the specification where slightly different terms are used to describe the elements that are identified by the numbers 134 and 418. In order to overcome this confusion, Applicants have amended the specification, in particular in paragraph 52 and 68, to clarify the specification.

Claim 12 was objected to as having an informality which has now been corrected by the amendment submitted herewith.

Claim Rejections – 35 U.S.C. § 102

Claims 1, 7, 9, and 11 have been rejected under 35 U.S.C. § 102(b) as being anticipated by the Klusewitz et al. U.S. Patent No. 3,142,549. This rejection is respectfully traversed.

Klusewitz et al. '549 discloses a respirator with a disposable pre-filter for use in filtering particulate matter and fumes from a paint spray operation. The respirator has a conventional main filter in the shape of a small chemical or cartridge of any suitable material which is used to filter air and particulate materials. The disposable auxiliary filter canister is mounted onto the main filter 4 to pre-filter the air for particulate materials, principally particles of paint in the air, so that the paint particles do not clog the main filter. As disclosed in Klusewitz et al. '549, the pre-filter pad is in the form of a filtering material such as cotton or loosely compacted paper "for collecting a substantial amount of paint spray or material suspended in the atmosphere which is to be filtered". Contrary to the Examiner's representation, there is no disclosure in Klusewitz et al. '549 of a filter for Toxic Industrial Materials.

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The claimed invention in this application is directed to a military type of respirator filter for use in a military or civilian worker environment which could face, for example, a terrorist attack, or which can be used on the battlefield where a potentially wide range of toxic chemicals may be used.

These military respirators have a standard NBC filter for use by the military to protect them against nuclear, biological and chemical attack. These filters are typically not designed to filter significant amounts of Toxic Industrial Materials which are ordinarily not encountered on the battlefield. In order to build into these filters vision capability to handle toxic industrial materials, the size of the filter would have to increase substantially.

Applicants' invention is key in providing an additional filter canister that includes a filter for Toxic Industrial Materials.

"Toxic Industrial Material" is a term of art which has a meaning in the respirator field. The Examiner's attention is directed to the publication by the U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, entitled "Guide for the Selection of Chemical Agent and Toxic Industrial Material Detection Equipment for Emergency First Responders". This publication on pages 9 and 10 describe Toxic Industrial Materials (TIMs) with respect to their chemical and physical properties. These are chemical materials that are typically produced in the industry in significant quantities and are readily available. Although not as toxic as nerve gas, they nevertheless pose significant threats to a population. It is necessary that precautions are taken to filter these TIMs from respirated air in certain circumstances. A photocopy of relevant portions of the Department of Justice report is enclosed herewith.

As the Examiner will appreciate from a review of portions of the U.S. Department of Justice report, Klusewitz et al. '549 is not concerned with the filtration of Toxic Industrial Materials. Whereas the Klusewitz et al. '549 main filter 4 may be capable of field filtering some of these materials in the carbon bed, the auxiliary filter has no capability of filtering many toxic gases.

Accordingly, claims 1, 7, 9, and 11 patentably define over the Klusewitz et al. '549 patent in calling for a third filter media adapted filter Toxic Industrial Materials. With respect to claim

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7, the Examiner has represented that Klusewitz et al. '549 discloses both a particulate filter and a absorbent filter in the third filter medium. Applicants have been able to find no support for this representation. The auxiliary filter in Klusewitz et al. '549 is a particulate filter and has no ability to filter toxic gases. Nor was it designed to do so.

With respect to claim 11, Klusewitz et al. '549 does not disclose a third filter media which is adapted to boost the capability of the first and second filter media to filter TIMs from contaminated air. The Klusewitz et al. '549 auxiliary filter has no capability of filtering TIMs from contaminated air.

In view of the foregoing, it is apparent that claims 1, 7, 9, and 11 are not anticipated by the Klusewitz et al. '549 patent. Withdrawal of the rejection under 35 U.S.C. § 102(b) is requested.

Claim Rejections – 35 U.S.C. § 103

Claim 8 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Klusewitz et al. '549 in view of the Sundstrom U.S. Patent No. 5,158,077. This rejection is respectfully traversed.

The Sundstrom '077 patent is cited to show a filter medium that comprises a pleated paper for filtering particles. Applicants acknowledge that pleated paper for filtering particles are well known and could be used in the Klusewitz et al. '549 respirator.

However, even if the alleged combination were to be made, it still would not reach Applicants' claimed invention. The combination of Sundstrom '077 with Klusewitz et al. '549 would simply add a pleated paper filter to the main filter of the Klusewitz et al. '549 respirator. The combination would not meet the limitations of claim 1 which calls for a third filter media adapted to filter Toxic Industrial Materials as set forth in claim 1.

Claim 10 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Klusewitz et al. '549 patent in view of the Newton U.S. Patent No. 5,660,173. This rejection is respectfully traversed. The Newton '173 patent is cited to disclose the use of metallic salt in order to broaden the scope of chemical filtration by including both physical absorption and

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chemical interaction with the impregnates to remove chemicals that are poorly absorbed and retained by physical absorption alone.

The alleged combination of Newton '173 and Klusewitz et al. '549 is traversed. There is no basis for making the alleged combination. There is no reason why Klusewitz et al. '549 would use metallic salts to broaden the scope of chemical filtration because they have no need to do so. The chemical filtration that is carried out by Klusewitz et al. '549 is fairly basic and only involves known solvents which are easily removed by ordinary carbon filtration. The metallic salts are used in more sophisticated filtration units for military use to filter sophisticated gases such as nerve gas. Thus, there is no reason for making the alleged combination.

However, even if the combination were to be made, however untenably, it still would not reach Applicants' claimed invention. The alleged combination would not include a third filtration media adapted to filter Toxic Industrial Materials as set forth in claim 1.

Claims 12 and 13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Klusewitz et al. '549. This rejection is respectfully traversed.

The Examiner has alleged that it would be obvious to make the primary and supplementary filter canisters in an elliptical shape as in obvious matter of design choice to a person of ordinary skill in the art. This representation is without foundation in the filtration media.

Cylindrical filtration canisters have been in common use for many years, principally because it is relative easy to accomplish these shapes in large scale production. It is also common for such filters to have a standard 40 millimeter diameter screw thread and attachment that stands the filter away from the side of the face as illustrated in Sundstrom '077 and in Klusewitz et al. '549.

Significance of the elliptical shape is that primary and secondary filters fit as closely as possible to the facial contour (conformal design) and that the screw fitting should be abandoned in favor of a twist and lock attachment mechanism to maintain the conformal shape. In this configuration, the inner surface of the main filter can be curved to make it conform closely to the face. This concept is not disclosed in the references. Applicants have found that available

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surface area indicated that the best fit would be accomplished with an elliptical shape. This shape minimizes the interference with a field of view of the wearer created by the presence of the filter. The Examiner is in error in alleging that the elliptical shape is merely a matter of design choice. The complexity of the shape and configuration of the filter canister significant benefits to the filter in a real world environment.

In view of the foregoing, it is believed that claims 1, 7-13 are patentable over the references of record.

It is noted with appreciation that claims 2-6 have been indicated as allowable if written in independent form. In view of the patentability of claim 1, from which these claims depend, Applicant has not rewritten these claims in independent form.

In view of the foregoing remarks and amendments, it is submitted that the claims are in condition for allowance. Early notification of allowability is respectfully requested.

Respectfully submitted,

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